Summary of Public Comments/Questions/Issues Raised & Recommendations for Bottomfish Restricted Fishing Areas (BRFAs): Meetings held January-February 2006

General Issues Common to All Islands

1) How long will the revised areas be closed?

Division of Aquatic Resources (DAR) Response: The determination as to how long the areas will remain closed must be based on how bottomfish stocks are doing (fish stock assessment) and DAR's evaluation of the need for, effectiveness and placement of the Bottomfish Restricted Fishing Areas (BRFAs). DAR is working with the National Oceanographic and Atmospheric Administration (NOAA) fisheries to develop monitoring and evaluation protocols for the revised BRFAs. The reevaluation period for the revised BRFAs has not yet been determined, but will certainly be at least 5 years after they are established. Although we acknowledge the public's wish that areas be reopened periodically, and include this option as one of our goals, the decision to reopen areas can only be made on a case-by-case basis for each BRFA, based on the results of research and assessment.

2) The State said that it would re-open the original BRFAs in five years. How much longer will these BRFAs remain closed?

DAR Response: It has been almost eight years since the original BRFAs were closed. While it has taken longer than five years for their evaluation to be conducted, we now have sufficient new information to revise the existing system of BRFAs. This information suggests that many of the BRFAs can be re-opened, while some should remain closed. 13 out of 19 existing BRFAs are scheduled to reopen, once the Administrative Rule Process is completed (early 2007 is targeted). There will be a reevaluation of the BRFA system periodically (see answer to #1). Right now, we cannot predict how much longer the BRFA system, as a whole will remain. That will depend on the status of the stocks. DAR plans to monitor both inside and outside of the BRFAs to evaluate their effectiveness. Bottomfish are slow growing and some take 3-6 years to reach sexual maturity (onaga about 7-8 years). This age at maturity, which relates to the length of a generation for each species, is a good indicator of the period of time it may take to see significant improvement in bottomfish stocks.

3) We are not overfishing our areas. Why is the State closing our grounds on the neighbor islands when the Oahu fishers are causing the overfishing?

DAR Response: We believe the Main Hawaiian Island (MHI) bottomfish stocks are all one stock. This means they should be managed as a single unit, rather than as a number of smaller units, corresponding to each island. Establishing many BRFAs throughout the islands should provide greater benefit to the MHI stock as a whole than establishing one or two large areas around Oahu. While one large area near Oahu (probably at Penguin Bank) could meet the goal of reducing the catch, it would not meet the biological goal of benefiting bottomfish stocks statewide. However, in response to the observation made statewide that overfishing was more of a problem around Oahu, an additional BRFA was added at Penguin Bank and adjustments were made to BRFAs around other islands, putting more of "the fix" where the problem (too much fishing effort) is greatest.

4) Some areas are naturally closed due to rough weather and sea conditions. Why is the State closing these areas if no one is fishing there?

DAR Response: We selected the areas based on habitat features, depth range, potential to reduce catch, location and current conditions; then we revised the BRFA selection to minimize social and economical hardships to fishing communities. Habitat was considered to be good if it met the criteria for being preferred by bottomfish. The amount of bottomfish catch tells us how many BRFAs should be established. Some of the best habitat occurs in places with rough oceanographic and weather conditions, but these conditions do not reduce the biological importance of these places. They can still provide benefits to the stocks. The focus of the State's plan is on protecting quality bottomfish habitat to ensure long-term sustainability of the stocks.

5) The recommended BRFAs are all my good fishing grounds. Closing them off will leave me nowhere to fish.

DAR Response: Our studies have indicated the BRFAs should be established where there is good bottomfish habitat. These places logically coincide with good fishing grounds. We selected areas based on the quality of the habitat but were careful to leave some good areas open for fishers, so they could continue to catch bottomfish. We made an effort to talk with fishers to be sure we didn't close off all their fishing grounds. DAR has adjusted the BRFAs based on fisher comments. Refer to the map of Revised BRFAs on the website.

6) The State said the areas would be closed and studied. What happened to the 5-year review of the State Bottomfish Management Plan? What has the State done and what did the studies show?

DAR Response: When the original BRFAs were established, it was our intention that they would be evaluated after five years. However, it took longer because of the extensive surveys and mapping of bottomfish habitat statewide. DAR contracted research through the University of Hawaii to conduct bottom habitat scans and create maps of the areas where bottomfish occur. The data provided the basis for evaluating habitat within the existing BRFAs and identifying new areas that we believe would make better BRFAs. DAR also conducted interviews with bottomfishers and reviewed commercial landings data to examine how the fishery has performed since BRFAs were established in 1998. Based on a review of this information less than half the BRFAs (9) were good, 4 were neutral and 6 were poor. A summary of the evaluation was presented to the public in January 2006 (see website), at which time the public indicated they would like more in-depth information. Therefore, we are currently developing a more in-depth report, which will be made public and placed on DAR's website when it is completed.

7) What is the difference between a seasonal and area closure?

DAR Response: Seasonal closures manage time (temporal), while area closures manage space (spatial). A seasonal closure affords protection to a species everywhere they exist, but only for a specified period of time. A time period of a few to several months (a "season") is not very long for bottomfish populations, given the long lifespan and length of a "bottomfish generation" (see answer to question #2). Seasonal closures manage effort more directly, compared to area closures. If fish aggregate during a specific time to spawn, they become more vulnerable (more fish can be caught in a shorter time). A seasonal closure could be an appropriate tool, depending upon whether the spawning aggregations occur in a specific area. An area closure, such as the BRFAs, protects a species all the time where the closed area is located. Area closures generally manage habitats. If a species prefers to spawn on specific habitats, but during different times of

the year, area closures would be a more appropriate tool. A seasonal closure for bottomfish would only affect fishing time. An area closure would protect habitat and fish throughout the year, while the fish are in the area. Bottomfish are known to be site affiliated, meaning that they tend to occur in certain areas and are not randomly distributed. While they do move, they prefer certain habitat and spend much of their time there. If we are able to restrict access to the areas where they spend most of their time, they will be protected from the fishery most of the time.

8) **There's no enforcement anyway. Why make more closures if you cannot enforce the areas you already have?**

DAR Response: Although DAR has not increased the number of BRFAs, we believe we are protecting better quality areas in the revised BRFAs. We recognize the importance of having an effective enforcement presence, but feel strongly that the lack of it should not be a deterrent to making sound management decisions. As the agency responsible for managing the state's bottomfish resources, DAR believes continuing and improving the quality of the habitat contained within the closed areas will provide the best protection for the bottomfish resources. Management of the state bottomfish resources involves scientific, social, economic, as well as enforcement considerations. Even when there is effective enforcement, if the areas being protected are not the most productive, protection for the resource has been compromised. By improving the BRFAs, we increase both the likelihood of their success and the effectiveness of the protection we are trying to provide to bottomfish. Both DAR and DOCARE believe that the majority of fishers are compliant because they want to sustain the resources. Because of that, many will abide by the regulations enacted to protect bottomfish resources. Enforcement presence is also key for fishermen who will not comply. An effort is being made to better address enforcement issues by DLNR's DOCARE. Although it may not be apparent, your action to report violations is vital and increases the likelihood that DLNR's enforcement presence will improve.

Island-Specific Issues/Questions/Comments

HAWAII

9) BRFA M covers prime fishing grounds in North Kohala and are only fished by a few fishers due to that area being exposed to harsh weather conditions (25 knots) most of the time, especially on the leeward side of Upolu Point. This area is abundant with bottomfish; it has large opakapaka and onaga. The fishing grounds are relatively flat and few fishing lines are lost. This area does not need area closure because it is naturally protected from high fishing pressure, due to sea and weather conditions and high predation from sharks, and only a few large vessels work in this area. Enforcement from land is difficult because there is very low visibility out to sea from the shoreline. However, there are tugboats in the area that could assist enforcement.

Suggestion from Public: Close one-half of recommended **BRFA M** by moving it towards the Hamakua coast.

DAR Response: **BRFA M** has been changed as a result of public input. Refer to the Hawaii County map on our website.

10) Existing BRFA 16 (AKA: Maunalani) is a good area closure because it is a nursery or breeding ground for juvenile opakapaka and onaga. Although there is an abundance of fish, these grounds have many peaks, making it difficult to fish because many lines are lost. Many of fishers wouldn't fish in existing BRFAs 16 and BRFA 20, if they were open, for those and various other reasons. These areas, along with recommended BRFA M, will not contribute to the 15 % fishing effort reduction.

DAR Response: DAR's research, contracted with the University of Hawaii with equipment from the Hawaii Undersea Research Lab (HURL), included surveys to confirm the presence of bottomfish resources at **BRFA 16.** The surveys indicated that **BRFA 16** does not contain as much good bottomfish habitat as some of the other areas around Hawaii. As a result, **BRFA 16** is scheduled to reopen when the new system of BRFAs is implemented. Closures will be moved to better habitat areas, where spawning sized adults can also be protected.

11) The recommended BRFAs, located at the points of the Big Island represent areas with some of the roughest sea conditions to fish for bottomfish.

DAR Response: The points of the Big Island contain some of the best bottomfish habitat and warrant protection for the bottomfish resources, in particular the onaga and ehu. The BRFA locations were chosen primarily for their biological values and secondarily for their potential to reduce catch. Establishing BRFAs at the points of an island make them easy for fishermen to identify and locate. An additional goal was to develop a network of BRFAs throughout the MHI, connected by favorable currents. The BRFAs on points are specifically designed to promote the interconnectivity of the BRFA system.

12) Not many comments were received about the closed area at Ka Lae.

13) BRFA M was a concern for the Kawaihae fishermen.

DAR Response: The location of was shifted to the east. Refer to the revised Hawaii County map on our website.

14) BRFA N: There are safety issues involving the prevailing trade winds that make getting back into port a problem in the region from the Hilo Breakwall to Lele'iwi Point.

DAR Response: The boundaries of this BRFA were changed based on this comment. Refer to Hawaii County map on website.

15) South of BRFA N there are also concerns with gear conflicts. From Lele'iwi Point towards Kumukahi Point there is a palu ahi fishery and deep handline fishery for weke (weke nono), using gears that look like bottomfishing gear.

DAR Response: The boundaries of this BRFA were changed to the extent possible, based on this comment, making the inshore boundary as far out as possible. This was done for all the BRFAs, placing the inshore boundary just inside the 50-fathom contour. However, the steepness and winding nature of the east coast of Hawaii made it particularly difficult to provide an equidistant inshore offset along the coast without running into the 50-fathom contour (which marks the shallowest bottomfish habitat depth range). Special consideration will be given in rulemaking to try and distinguish between bottomfishing and similar gears, particularly in this. Refer to the Hawaii County map on the website and detailed map of new BRFA L.

16) Why don't you close the area off Olowalu?

DAR Response: The bottomfish habitat in this area is not as good as in other areas.

17) Although landings have declined since 1970, Hawaii fishermen feel there is still an abundance of bottomfish. What percentage of State bottomfish landings is attributed to the Big Island?

DAR Response: Of the 7 bottomfish species regulated under the State Bottomfish Management Rules, almost 14% of 2004 reported commercial landings in the MHI were from Hawaii County.

MHI Reported Commercial Bottomfish Landings: Calendar Year 2004
(Opakapaka, Onaga, Ehu, Gindai, Lehe, Kalekale, & Hapu'upu'u)

Island (landing port)	No. of Fishers	Lbs. Landed	% Landings
Maui County	87	109,794	45.10%
O'ahu	125	75,450	30.99%
Hawaii County	106	33,776	13.87%
Kauai County	35	24,417	10.03%
MHI Total	**348**	**243,437**	100.00%

KAUAI

18) Based on a straw poll at the public meeting conducted in Lihue, the table below presents the number of fishermen that say they would be impacted by the five proposed BRFAs in Kauai County. Of the 32 persons in attendance at the public meeting, the number answering "yes" is noted below:

BRFA	Number	Percent
A	32	100%
B	19	60%
C	24	75%
D	8	25%
E	12	38%

- **The recommended BRFAs A & C cover prime offshore fishing grounds and are already receiving natural protection from fishing effort due to their long distance from Kauai, severe sea conditions, and high rate of predation by sharks and porpoises.**
- **Recommended BRFA A takes out 50% of Ka'ula – too much! Not necessary!**
- **Ka'ula is already closed by the Federal government due to the missile firing range.**
- **Recommended BRFAs B & C off Niihau contain good rock habitat, but the two recommended BRFAs D & E off Kauai don't.**

Suggestion from Public: Keep recommended **BRFA A** and **BRFA C** areas open. Although Ka'ula appears to be a small area, depending on the current and wind direction, fishermen must travel a long way around the recommended **BRFA A** to avoid predators.

19) Kauai only has a handful of highline bottomfish fishermen, and the area closures place a severe hardship on them. These are the only fishermen that can fish the far offshore areas such as BRFA A (Ka'ula).

20) Kauai constitutes only 5% of the State's total population, yet 5 of the BRFAs, or 40% of the proposed BRFAs are in Kauai County. This is an equity issue.

Suggestion from Public: Reduce the number of BRFAs around Kauai and increase them around Oahu or in Penguin Bank. Based on population density, there should only be one BRFA in Kauai, and the other four areas should be shifted to other counties.

DAR Response: The BRFAs for Kauai County have been changed as a result of public input. The number of BRFAs around Kauai, Niihau, and Ka'ula has been reduced from 5 to 3 (one on each island and Ka'ula Rock). Refer to the map of the revised BRFAs for Kauai County and detail maps for new BRFAs A, B and C on our website. See also answers to #3, #4, & #5.

21) Is the 15% fishing effort reduction for Kauai or the State?

DAR Response: The 15% fishing effort reduction is a federal mandate that results from the Magnuson-Stevens Fishery Conservation and Management Act to end an "over-fishing" condition for the bottomfish resources in the Main Hawaiian Islands (MHI). The mandate applies to landings for the entire MHI (Ka'ula, Ni'ihau, Kauai, etc., to the Island of Hawaii).

22) The recommended BRFAs have the effect of shutting out fishermen and closing businesses in Kauai. Fishing in Kauai is an important culture and the revised State BRFA plan will adversely affect the amount of fish that can be caught for subsistence and commercial purposes. This will impact many businesses in the community.

23) BRFAs on Kauai should be placed around areas controlled by the military.

24) There are more important issues that the State should consider instead of shutting down fishing areas to the seven highline-bottom-fishermen on Kauai.

25) Oahu has more licensed fishermen than Kauai; therefore to reduce fishing effort, the BRFAs should be placed around Oahu.

DAR Response: See DAR Response #3

26) BRFAs should be placed closer to shore along Kauai.

27) Prefer to close areas where sea conditions are calmer.

DAR Response: See DAR Response #4

MAUI

28) Consider closing the bottomfish grounds around Molokai to non-Molokai fishermen, and allow only Molokai fishermen to bottomfish around Molokai.

29) Suggest moving BRFA H five miles further west to enclose the second finger of Penguin Bank.

30) Opposed to all three BRFAs around Molokai (BRFAs H, J, and K).

31) Are the BRFAs recommended for closure off Hana permanent?

DAR Response: We cannot predict at this time how long the BRFAs may be closed (see answer to question #1). BRFAs may be reopened if the stocks no longer require them and/or the areas may be shifted periodically.

32) Are you trying to close ALL the pinnacles off Hana?

DAR Response: The Hana BRFA has been changed based on the community's comments. Refer to the map for Revised BRFAs, Maui County on our website and detailed map of new BRFA J.

33) You are going to open up BRFA 14? What does the data say about that BRFA?

DAR Response: BRFA 14 was one of only four existing BRFAs that we considered to have done fairly well. This was due to its effect on (reducing) catch (placement in a fairly high yield area), its location near good habitat, and the fact it appeared to be less of an inconvenience to fishers than some of the other BRFAs. However, it was determine that BRFA 14 narrowly missed some important habitat areas that should have been included. This was in part why a different area was selected for East Maui.

34) BRFA 14 is in the channel, rough water, nobody can fish there.

35) How much research on the bottom habitat around Hana has been done?

DAR Response: DAR shared this information with the Hana community at subsequent public meetings.

36) You do not have enough data to close BRFA L.

37) The Hana community was opposed to permanent BRFAs.

38) The recommendation for Hana, BRFA L, restricts entry to about three miles of coastline. That's a lot.

39) BRFA L right outside Hana, is our refrigerator, everyone makes a living fishing there.

40) Around the Hana BRFA, you need to put out buoys. This fishing community does not have electronic equipment.

41) Move BRFA L more to the north, not to the east or to the south side.

42) Moving BRFA L north to Ke'anae is better.

DAR Response: The revised BRFA site (reassigned letter J) is near Ke'anae.

43) Most of the fishing around Maui is on the leeward side of the island. Move BRFA L and BRFA K to the leeward side of the island.

DAR Response: DAR held several meetings in Hana to discuss our reasons for creating a BRFA there. After the discussions, we believe the community may be more accepting of the revised Hana BRFA, although we recognize there may never be 100% agreement on its location.

44) How many times were cameras dropped in the area being proposed for closure near Hana?

DAR Response: Some sites were selected partially on the basis of images from submersible dives and a few camera drops. The BOTCAM drop camera is a fairly new technology and researchers are now conducting studies with it. Up until now, there have been no camera drops off Hana and the selection of the BRFA near Hana was not based on camera studies. Changes to the BRFA system were primarily based on multi-beam data analysis, coupled with fishing surveys. The multi-beam data provided precise measurement of essential fish habitat areas, as well as the amounts of slope and hard substrate. Fishing surveys helped ground-truth potential bottomfish habitat sites. This information helped identify potentially good BRFA sites in this region. The final recommendation for the number, area and placement of BRFAs was based on efforts to achieve the mandated 15% reduction in fishing mortality and other considerations, such as areas likely to do the most good with respect to larval export, protecting probable breeding habitat and areas utilized by juveniles.

O'AHU

45) Establishing BRFA F is going to impact Hale'iwa fishermen.

46) Close the area between BRFA 7 and BRFA 8, instead of establishing BRFA F.
DAR Response: the Wai'anae community recommended an area between Barber's Point and Koko Head. DAR found there was relatively poor bottomfish habitat there compared with the areas selected around Oahu.

47) Move the shoreward boundary away from the land area.
DAR Response: Inshore boundaries for all BRFA were moved as far from shore as possible (Refer to map of Revised BRFAs for Oahu).

48) BRFA F restricts the whole exposed side of Ka'ena Point. Why? The area is already protected by nature; weather and ocean conditions are really rough out there.
DAR Response: See DAR Response #4

49) Why not close the leeward side of Ka'ena Point instead?
DAR Response: See DAR Response #46 (better habitat)

50) Move BRFA F to the leeward side of Ka'ena Point and down along the Waianae Coast.
DAR Response: DAR has changed the Ka'ena BRFA based in part on comments from the public. (also see responses #46 & 49)

51) State need only close Penguin Banks to attain the 15% reduction in fishing effort.
DAR Response: See DAR Response #3

52) Leave the existing 19 BRFAs the way they are.

53) Establish BRFAs where fishing grounds are already fished down.

54) Close areas where people don't fish at all to obtain the 15% fishing effort reduction.

55) Move BRFAs to areas where the tourist dive boats operate.

56) Are the areas going to be closed permanently?
DAR Response: See DAR Response #1

57) What are the results of the closed areas?
DAR Response: See DAR Responses for #6 & #7

58) What are the benefits of BRFAs?
DAR Response: See DAR Response #8

59) How do you get an idea of what's happening in the BRFA, when fishing is prohibited in them?
DAR Response: One way is to monitor catches from nearby open areas. DAR has also contracted monitoring work, involving the use of baited underwater cameras. This work will be continued with the new BRFAs. Additionally, experimental fishing within the BRFAs is considered an important element of the monitoring plan that is being developed.

60) Where are ACTUAL data from the closed areas?

DAR Response: Reported commercial catch and effort data from adjacent areas, and abundance, species and size data from surveys conducted by the University of Hawaii have been evaluated and will be summarized and posted on the website. Detailed habitat survey data are currently not being made public because of potential impacts on the fishery. Commercial catch data are protected due to confidentiality issues, but general trends can be described.

61) Why is the State only considering the restricted area (closed area) management plan?

DAR Response: Other provisions of the current BRFA management plan (recreational bag limits, BF vessel registration, etc.) will continue. Although the State has considered other options, during 1998 DLNR/DAR committed to a habitat-based management system. This was in part because, at the time, the only successful management scheme that had been tested for bottomfish was an area-based system (for snappers and groupers in Florida). Our research on bottomfish and their habitat distribution indicates that this method has not yet been adequately tested in Hawaii. Revising the current BRFA system to include what is now known about Hawaii's bottomfish habitat is a logical follow-up to ongoing bottomfish research and management.

62) Why are the areas closed all the way to shore? The maps of the recommended BRFAs are confusing. The purple boxes include areas of the shoreline and inshore waters. Are these areas going to be restricted?

DAR Response: It was never the intention to regulate fishing on land. Because of confusion and public comments, the maps were changed to specifically show that BRFAs do not extend to shore. Revised maps are posted on the DAR website.

63) How are the restricted areas being picked?

DAR Response: See DAR Response #4

64) If fish move how can BRFAs work?

DAR Response: See DAR Response #7

65) So does the data tell you that closed areas work?

DAR Response: The available data show that there has been a decrease in fish catch and effort, which was necessary to reduce fishing mortality at the time the BRFAs were implemented. However, our data also indicate that the current BRFAs are not placed in the best areas to conserve bottomfish resources. This is the reason for the changes being made to the current BRFAs.

66) Are the old areas going to be opened?

DAR Response: Yes, many but not all of the current BRFAs will be re-opened. See #2 and refer to the revised map of BRFAs on our website.

67) Bottomfish restricted fishing areas are similar to Marine Protected Areas (MPA), which become permanent area closures.

DAR Response: The BRFAs are a type of MPA. Although there are many permanently closed MPAs, both in Hawaii and elsewhere (for example Hawaii's Marine Life Conservation Districts), a marine protected area does not necessarily have to be closed permanently. See DAR Response #1

68) When is the new BRFAs system going to be implemented? How many BRFAs are in the new system? When the new system of BRFAs is implemented, what will be the actual amount of reduction in effort?

DAR Response: DLNR is in the process of drafting administrative rules for the final system of revised BRFAs. The rulemaking process is lengthy, but we hope to have final rules in place by January 2007. The proposed system of BRFAs includes 12 BRFAs. Fishing effort reduction is expected to be approximately 15%.

69) I don't think you (the State) have enough data to make good recommendations to close any areas permanently.

70) The new areas are much bigger than the existing ones.

71) People are afraid that you are proposing to eliminate the fishing areas on the shore and the in-shore waters.

DAR Response: See DAR Response #62

72) Rotate the closed areas.

73) Fishermen say they were promised that the original restricted areas were only going to be closed temporarily. The areas were only going to be closed for five years, but it's seven years later.

DAR Response: See DAR Response #2

74) Further explanation is needed on spillover and information on where the juvenile breeding grounds are located. Do area closures protect spawning and nursery grounds?

DAR Response: The purpose of the proposed BRFAs is to close areas with essential bottomfish depth habitats for the purpose of protecting bottomfish resources from fishing effort. The University of Hawaii/DAR surveys verified presence of bottomfish resources in certain areas. There were also indications that large adults (potential spawners) and juvenile bottomfish were also present in the areas surveyed. Additional research and surveys are needed to verify how long fish remain in a given area, or whether spawning and spillover take place.

75) There were no spillover effects from the current Wai'anae BRFA.

76) Fishermen were concerned about the way the term "overfishing" is used. It implies that fishermen are the cause for the reduction in the resources.

77) How do you know that fishermen are the cause for the reduction of the bottomfish resources?

DAR Response: The current management concern is not a reduction of bottomfish resources, but a large amount of catch (fishing mortality) and number of trips (fishing effort), which the resource could not sustain if allowed to continue at this level. By reducing effort and catch, we can avoid a serious reduction in bottomfish stocks. If allowed to reach that level, management solutions can require a lot more time and trouble and have a much larger impact on the fishing community (including measures such as fishery closure).

78) Are you saying that humans are the problem for the decline in bottomfish resources?

DAR Response: There are many different factors that influence bottomfish populations. Some we cannot manage, such as food abundance, currents, water quality, temperature, etc. Fishing activity is one of the few factors affecting bottomfish resources that fishermen and resource managers working together can address.

79) Fishermen commented that the BRFA restricts them from fishing in a particular area. They said that with closed areas they would have to expend "EFFORT" to find new fishing grounds. So they are exerting MORE effort to continue fishing for bottomfish. How is that reducing the EFFORT?

DAR Response: When fisheries scientists refer to the rate at which fish are caught, they call it catch per unit of effort or CPUE. The "effort" they refer to is the amount of time, hooks, hours, etc. fishers spend catching a fish. While it is unfortunately true that closing prime areas may cause fishers to work harder and use more effort to catch fish, this increased search-effort required to catch the fish (including time spent looking for other fishing areas, fuel costs, etc.) is a component of the effort fisheries scientists are referring to in stock assessment. The comment by fishers that CPUE may go down in response to closed areas (because effort goes up) points out a weakness in using CPUE as a measure of stock status. To address this problem, fisheries scientists try to standardize measures of fishing effort over periods of time when the method and type of fishing changes. Changes in "fishing power", such as the use of hydraulic reels, fish finders, and other gear that makes fishing more efficient must be factored in over time, in order to make accurate assessments of fish stock status. This is the reason detailed information about fishing effort is requested in fish catch reports.

80) Summary of comments about fishing reports:

The justification for BRFAs becomes questionable if the data used to evaluate the area is solely "fishery dependent" (based only on data provided by the fishery). This is true, especially in areas that are naturally protected by sea and weather conditions and where only a few fishers, with larger vessels, are able to fish and provide catch data. The result is that the data indicate reduced fishing effort. The small number of fishermen, trips and landings from these areas would not be enough to indicate trends and the results are statistically skewed.

The fishing reports do not provide an accurate representation of recent trends in the bottomfish fishery. Data from the fishing reports indicate landings are declining, but fishers feel this is not the case. Fishers claim that lower landings in the bottomfish fishery are a result of highline fishermen leaving the fishery, changes in fishers' status (from full-time to part-time) and predation by sharks, porpoises and kahala. Predation is so bad in areas around Ni'ihau and Ka'ula Rock that some fishermen either stopped fishing or reduced their number of fishing trips. Thirty years ago, predation on bottomfish was not a problem, and the fishing reports that commercial fishers were required to submit each month did provide a way for fishers to report this information to the State. Monk seals, relocated from the Northwest Hawaiian Islands (NWHI) to the MHI by the National Marine Fishery Service (NMFS), are also adding to the predation problem. Fishers said that if there were no predation, they would be able to land more fish.

Fishers also said that the reduction in effort in the bottomfish fishery is a reflection of inexperienced fishers who catch less and make fewer trips, entering the fishery and

old-timers making fewer trips. Additionally, many bottomfish fishermen are seasonal fishers, who fish for bottomfish during the winter and for ahi during the summer. Fishers feel that the effort in the bottomfish fishery should actually be increasing. New entrants into the bottomfish fishery need to learn how to catch bottomfish in order to decrease fishing effort.

Suggestion from Public: Keep South Point (BFRA #19) and recommended BFRA O and BFRA M open, and then fishing effort would increase.

81) Fishermen are aware of the limitations of the data obtained from the fishing reports and feel that this information is being used against them to evaluate the BRFAs.

Suggestion from Public: Commercial fishermen should report fish lost to predation on their monthly fishing reports. This information could be used later to evaluate actual fishing effort and landings, and perhaps avoid a conclusion that the bottomfish fishery is in an over-fished condition.

DAR Response: In terms of estimating trends in bottomfish landings from the commercial sector, the best available data is from monthly fishing reports submitted by commercial fishermen. The Hawaii Marine Recreational Fishing Survey (HMRFS) surveyors interview recreational fishermen to get information about their fishing trips and catch. They are not able to collect enough data from recreational bottomfish fishermen through their surveys to provide a statistically significant estimate of trends in recreational bottomfish landings. The surveyors are limited by manpower, logistical and safety concerns. The fishing report data submitted by commercial fishermen serves as an index of trends in the amount of bottomfish harvested and the rate of catch CPUE (see #79). DAR is aware that fishermen left the fishery for a variety of reasons (retirement, to participate in other fisheries, etc.), especially after existing BRFAs were established in June 1998. Some fishermen who left the fishery were highliners. Their exit from the bottomfish fishery contributed to some of the decrease in bottomfish landings from 1998 to the present.

Commercial fishermen are encouraged to comply with the monthly fishing report requirement and report their catch as accurately and truthfully as possible. All bottomfish trip activity should be reported, including the portions of catch 1) sold, 2) used for bait, 3) used for home consumption, 4) released, or 5) lost to predation. Information from an accurate and truthfully reported fishing report provides a valuable tool to fishery managers, allowing us to better assess and manage the fishery.

82) How is the 15 % fishing effort reduction figure derived?

DAR Response: The Pacific Island Fisheries Science Center (PIFSC), NOAA Fisheries, used Hawaii's bottom fishery's officially reported data (DAR's Commercial Fish Catch Report and Fish Dealer Report data) to calculate ratios of CPUE (see answer # 79) at Current to Maximum Sustainable Yield (MSY) levels. Theoretically, if the bottomfish fishery were operating at or below its sustainable level, the ratio of Current CPUE to MSY CPUE would be 1:1 (100% or less). Conversely, if the harvest rate (CPUE) were above a sustainable level, this ratio would be greater than 1:1 (i.e. harvest is occurring at more than 100% of the sustainable rate). According to the PIFSC 2003 assessment, the low-end CPUE ratio in the Hawaiian Archipelago (1.14 or 114%) exceeds the maximum threshold ratio by more than 14%. Because most fishing effort takes place in the MHI, PIFSC's assessment is that fishing effort in the MHI should be reduced by 15%.

83) How did the State calculate a fishing effort reduction of at least 15% for proposed BRFAs?

DAR Response: Reported commercial catch (lbs) and effort (fishing trips) were compiled for all seven bottomfish species regulated by the State, and each commercial reporting area fished. Assuming trends in commercial catch provides a valid index of trends in non-commercial catch, the percentages for each sector should be comparable. This appears to be fairly true for the bottomfish fishery, at least in terms of species and location (sizes caught or target varies significantly for commercial versus non-commercial fishers). Reported commercial catch data for each reporting area were partitioned according to the proportion of Bottomfish Habitat Depth Range (BHDR) and Potentially Identified Habitat Areas (PIHA) found inside or outside the existing versus recommended BRFAs, for each commercial reporting area. DAR used these proportions to estimate the percentage of reported commercial landings attributable to each BRFA and fishing area (whether existing or proposed), and summed the data over all fishing areas in the MHI. The estimated 15% reduction in fishing effort (trips) and 19% catch (pounds) DAR estimated for the MHI, is the difference between the amount of estimated catch from the recommended versus existing BRFAs, taking into account the overlap/re-opening of some areas.

84) The foreign fleet causes problems in the fishery. Where does baseline data, reflecting depletion of bottomfish fisheries in the MHI, come from?

DAR Response: Foreign fishing fleets are not allowed to fish in State or Federal waters. Only data from in-state (US) commercial fishing and fish dealer reports are used to estimate trends in bottomfish landings.

85) Current BFRA #1 is represented by 3 codes for area fished (505, 525, & 527). There may be some errors in reported landings because of a faulty chart in the fishing report booklet.

DAR Response: The charts provided in the booklet issued with commercial catch licenses were accurate. However, a separate sheet map created during the interim was inaccurate. DAR has corrected the error in the separate sheet chart that accompanied bottomfish catch reports. New charts are now available.

86) Fishermen DO NOT want to report truthfully. They feel that the information they provide on their monthly fishing report is being used against them to develop restrictions, regulations, and management measures that work against them.

87) Fishermen DO NOT want to talk to surveyors. (Same reasons as above).

88) Explain how the commercial catch data are used.

DAR Response: See DAR Responses # 81-83

89) Fishermen are concerned with the accuracy, frequency and value of available data and surveys.

90) Fishermen wanted access to all the data, in order to analyze it themselves.

DAR Response: Due to data confidentiality laws, we are not allowed to provide this information to the public. These laws are meant to protect fisher's sensitive fishing information from competitors. A fisher can provide written authorization to release his or her own data to the public. Otherwise, DAR does not release raw data.

91) Fishermen are confused about who receives their monthly catch reports and how the information from their reports is shared and used.

DAR Response: DAR receives and enters data from written fish catch reports into an electronic database. We share these data with federal fisheries scientists at the National Marine Fisheries Service (NMFS) Pacific Islands Fisheries Science Center (PIFSC) and statisticians of the Western Pacific Fisheries Information Network (WPacFIN). These and DAR's own scientists analyze the data and prepare summaries, protecting individual fisher's data. DLNR/DAR, Pacific Islands Regional Office (PIRO) and the Western Pacific Fisheries Management Council (Council) use data summaries to assess fisheries and develop management measures, as necessary.

92) I go out fishing everyday and never seen anyone dropping cameras in the water.

93) You (the State) don't study areas enough that you are recommending for closure.

94) Who is responsible for enforcing the BRFAs? If the BRFAs are not enforced, but a 15% reduction in fishing effort is needed, how is this accomplished?

Suggestion from Public: The State's system of BRFAs do work but it requires enforcement; the fishermen need to put pressure on the Division of Conservation and Resource Enforcement (DOCARE) because DAR plans to administer BRFAs regardless of any additional alternative Federal management action.

DAR Response: DOCARE has the authority and responsibility to enforce the rules and regulations for the entire Department of Land and Natural Resources (DLNR).

95) Were citations issued for violating the State Bottomfish Management Rule? Many are not aware of a single arrest. For example, Kauai fishers claim that a poaching incident was witnessed in the Kilauea BRFA, but no one has ever heard of a single citation issued for poaching in the BRFA on Kauai. Zero enforcement! State has not done its job enforcing the BRFAs.

DAR Response: There was one citation and 3 actions taken relating to the State Bottomfish Management Rule.

96) If BRFAs are enforced, then further fishing regulations are not needed, i.e., 'protect the resources and enforce existing regulations before adding more rules'. The United States Coast Guard (USCG) should enforce the fisheries laws too and this may help attain the 15% fishing effort reduction.

Suggestion from Public: Every licensed fisherman with a vessel should have to register his/her vessel for a 'CF' designation. This would allow USCG to assist in enforcing rules for all of the commercial vessels and lead to a 15% reduction in effort.

DAR Response: The bottomfish fishery consists of both commercial and recreational fishers. The "CF" designation is only required for commercial fishing vessels, not recreational. The USCG would enforce federal regulations, such as for vessel safety equipment, drug trafficking, water pollution, and homeland security, but not normally enforce state fishing regulations. While we would welcome the assistance of the USCG, it is not likely we will get a lot of enforcement of fishery regulations given their other responsibilities. The more appropriate federal fisheries enforcement agency would be the NMFS Office of Law Enforcement (OLE). However, of the four NMFS OLE officers assigned to Honolulu to enforce fisheries regulations for the whole Pacific region (Hawaii, Guam, American Samoa, and Marianas), there are only two field officers.

97) DLNR plans to ask the Legislature to provide additional funds to increase DOCARE staff so that they can to do more fisheries enforcement. There are notable concerns whether this will be effective because very few bottomfish fishermen were cited by DOCARE.

DAR Response: Through action of the Legislature, eleven existing DOCARE officer positions received funds that redirect their enforcement duties to increase their "on-the-water" presence.

98) Enforcement in monitoring current BRFAs and checking recreational bag limits is lacking.

Suggestion from Public: DOCARE should and could easily check the recreational ehu and onaga bag limit.

99) There was a concern with mistaken identity while transiting the BRFA. What if you catch bottomfish in the open areas, but transit inside a BRFA, or stopped inside a BRFA to do some other kind of fishing, not bottomfishing, how will DOCARE know whether or not you are legally fishing?

DAR Response: These concerns and others will be discussed with DOCARE as the administrative rules are developed.

100) How would you impose restrictions on the subsistence fishermen?

DAR Response: Restrictions on subsistence fishermen would be imposed through a state law.

101) Is every boat going to be checked?

DAR Response: Every boat is subject to inspection

102) Are you going to regulate only daytime? What about nighttime?

DAR Response: The regulations apply at all times.

103) There needs to be regulation of the rules. You cannot even regulate what's on the books now.

DAR Response: See DAR Response #8

104) How will the State monitor the revised BRFAs?

Suggestion from Public: Since fishing reports are used to evaluate fishing effort, allow fishermen to fish the BRFAs and report their activities. This should provide a better estimate of fishing effort and catch. The effectiveness of BRFAs can be evaluated from fishing reports submitted by these fishermen. This should be done now especially since certain areas that have been closed for 8 years are going to be opened up.

DAR Response: DAR is participating and coordinating with Federal fisheries agencies to develop a scientifically sound monitoring plan.

105) A seasonal closure rather than BRFAs is preferred. Some claim bottomfish grow fast enough to re-stock an area. It appears that the BRFAs will be permanent.

DAR Response: Studies have shown that bottomfish do not grow or mature very rapidly. Most bottomfish species take between 3 to 6 years to reach sexual maturity, at which time they can begin to reproduce. Seasonal closures do not offer the quality of protection that BRFAs can over a long period of time, which is needed to ensure that as many bottomfish as possible can reach sexual maturity and reproduce before they are caught.

106) What about imposing a seasonal closure based on when bottomfish spawn?
DAR Response: See DAR Response #105

107) Impose a seasonal closure based on the amount of time it takes bottomfish to reach market size.

108) Close the BRFAs only for the amount of time it takes for bottomfish to reproduce. How many years would that be?
DAR Response: See DAR Response #2

109) The State is blamed for the introduction of the ta'ape. Ta'ape has flourished and is a problem because they feed on juvenile bottomfish and other food sources. Only the commercial passenger dive boats like the ta'ape for tourists to see.
Suggestion from Public: Instead of the Legislature providing DLNR with funds for enforcement, funds should be provided to 'clean up' the ta'ape problem. Funds could be used to compensate fishermen that fish for ta'ape and kahala to keep their stocks down.

DAR Response: A study of the effects of ta'ape on bottomfish resources determined that there is no indication ta'ape eat juvenile bottomfish. They do consume another small red fish, but this is not any of the seven bottomfish species regulated by DLNR/DAR. This report may be downloaded at www.Hawaii.gov/dlnr/dar/bottomfish/index.htm

110) Does anyone know how ta'ape are affecting the bottomfish resources? When bottomfish fishermen catch ta'ape, they've seen them spit up juvenile onaga and ehu.
DAR Response: See DAR Response #109

111) Why doesn't the State have a program to eradicate the ta'ape?
DAR Response: DAR doesn't feel ta'ape are impacting bottomfish. (see Response #109)

112) What is the reason for restricting the area between 50-100 fathoms? Are you trying to protect ta'ape?
DAR Response: The depth range from 50-200 fathoms is where the seven bottomfish species regulated by the State are known to occur. Ta'ape is not among these bottomfish species, as defined in State law. Taking of ta'ape is not prohibited, whether within BRFAs or elsewhere. Catching ta'ape is probably the most effective way to limit their numbers and reduce any impacts they may have on Hawaiian ecosystems.

113) Opakapaka are still abundant and are caught at 45 fathoms (did not disclose area).

114) Only old-timers will be able to fish for ehu and onaga. Many fishermen pick up red fish for subsistence use. Big Island red fish prices are not very good.

115) Advocate a "grandfather clause" for bottomfishing restrictions.

116) If the NWHI bottomfish fishery is closed, federal NWHI bottomfish permit holders may exert fishing pressure in the inshore and offshore areas in Kauai County.

117) State did not do a good job of informing the fishermen about the Hawaii Underwater Research Laboratory (HURL) surveys and research project. There are a lot of positive evaluations from the project that support the BRFAs. This information should be presented to the public.

Suggestion from Public: Recommendation to organize a workshop for Kauai fishermen to educate them about BRFAs and the necessity for protecting preferred bottomfish habitat, protecting spawning areas, explain "spillover" and perhaps assist in recommending BRFAs.

118) A system of BRFAs will eventually end up like the Federal permitted longline fishery and fishermen will have to pay $30,000.00 for a permit to participate in the fishery.

119) Why didn't the State consider a limited-entry program for the (bottomfish) fishery? Fishing reports work well to document participation and anyone who wants to remain in the fishery would comply with reporting requirements. There needs to be a way to document crew participation in the fishery and eligibility for limited entry permits. What other option has the State looked at?

Suggestion from Public: Alternative fishing regulations would be to 1) establish a price or fee schedule for a fishing quota, 2) set a limit on the number of commercial fishing licenses (similar to a fisheries permit) and as fishermen leave the fishery (quit, retire, etc.), fishing effort will be reduced, or 3) increase the minimum size for sale.

DAR Response: Of the various strategies to manage the bottomfish fishery, DLNR/DAR felt BRFAs were the best alternative, because they provide long-term protection for long-lived, slow maturing, relatively sedentary bottomfish resources. All fishermen who intend to participate in the bottomfish fishery in the MHI are required to register their fishing vessels with DAR. Limited entry is a more extreme measure than we believe is currently necessary for this fishery. Fishing quotas require highly accurate, "real-time" reporting, in order to be able to keep track of how much fish has been caught and close the fishery whenever the quota is met. This would not be a practical alternative for Hawaii. Because ehu and onaga are caught at such great depths, their survival after being brought to the surface is questionable. Thus, whatever measures might reduce the number of fish sold, they may not necessarily reduce the number caught or killed (fishing mortality). Because of the survival issue, minimum size or slot limits would also not be a good option.

120) Fishing by the foreign fleet and importing must cease altogether.

Suggestion from Public: State should impose regulations (tariffs, etc.) on businesses that import fish.

DAR Response: DLNR does not have the authority to apply tariffs on imported marine life or products caught outside State Waters.

121) BRFAs reduce the amount of fish taken to the markets and are replaced by imports.

122) Recently, large commercial shrimp trap vessels fished around Kauai are taking the ama ebi, which is a food source for onaga. These vessels have lost quite a few large anchors on the reef, which causes habitat destruction.

Suggestion from Public: Both the State and the Federal government should regulate the large commercial shrimp trap vessels.

DAR Response: PIFSC samples of bottomfish diet indicate that shrimp species consumed are not ama ebi, targeted by commercial shrimp vessels. DLNR, NOAA Fisheries, and WESPAC continue to monitor the activities of large-scale shrimp trap vessels, which are mainland-based, pulse fishing in Hawaii every 5 to 7 years.

123) The State basically responds to Federal mandates.

124) When the State implemented the BRFA system in 1998, it caused hardship among some fishermen. Many highliners left the fishery. Some retired, some passed away. There are less GOOD bottomfish fishermen participating in the fishery.

125) The number of fishermen participating in the bottomfish fishery is deceiving. When the State implemented the BRFA system in 1998, it triggered a rush among fishermen to register for the bottomfish fishery. Many fishermen who registered never bottomfished but decided to register, "just in case."

126) The BRFAs inside the purple boxes include the shoreline and near shore waters. You are telling us that the restriction is only for bottomfish, but how do we know that this recommendation is NOT going to become something bigger? Today the restriction inside the box is for bottomfish only and tomorrow the restriction will include the land areas in the purple boxes and shoreline fishermen will not able to fish from the shorelines.

DAR Response: See DAR Response #62

127) Who is a commercial fisherman?

DAR Response: DLNR considers anyone who takes marine life and lands it in the State for commercial purposes a commercial fisherman. Anyone who does this is required to obtain a commercial marine license and report his/her catch, including the unsold portion (§13-74-20, Hawaii Administrative Rules). Commercial catch reports have made up the best index of Hawaii fisheries since the early 1950s.

128) It appears that HURL verified the presence and abundance of bottomfish resources. Is the State considering removing the BRFAs?

DAR Response: HURL research was conducted to confirm the presence and "relative abundance" of bottomfish resources throughout the MHI. The term "relative abundance" does not mean resources exist in surplus, but refers to whether there is more or less of a given species in one area relative to another (biomass, lbs/numbers per unit of area/volume, etc.). In addition to fish numbers, population structure (proportion of large/old to small/young individuals) is just one of many important indices of resource health. HURL surveys have only begun to quantify these aspects with respect to the geographic distribution of bottomfishes. Based on information from HURL research, some BRFAs are being removed, but analyses are ongoing. The State is not considering removing all BRFAs.

129) How do you improve habitat?

DAR Response: The BRFAs are not intended to improve the habitat. Instead, DLNR/DAR is trying to increase the amount of good quality habitat protected by BRFAs. Many of the existing BRFAs do not contain much good habitat.

130) What are the impacts if fishing regulations are imposed at Middle Banks?

DAR Response: DLNR is not proposing to locate any restricted fishing area at Middle Banks, because this area lies entirely in Federal Waters. Management of Middles Banks falls within federal fisheries management jurisdiction. WESPAC would close Middle Banks under their plan, and it would fall under WESPAC's management responsibility to determine potential impacts of such a measure.

131) What about imposing reasonable size and bag limits?

DAR Response: The State's plan currently has a recreational bag limit for ehu and onaga. Additionally, there is already a size limit for the sale of onaga and opakapaka. Managing bottomfish with size-specific measures is challenging, because it is hard for fishers to accurately select the size of fish caught, despite targeted geographic (area-specific) and bathymetric (depth-specific) fishing effort.

132) What about considering slot limits like they have on the mainland?

DAR Response: See DAR Response #131

133) Did the State even think about a restocking plan for bottomfish?

DAR Response: The State is conducting research on culturing bottomfish as a potential restocking option, but cost-benefit analysis usually shows that a "put-and-take" fishery is not cost effective (thus not a good use of taxpayer-generated funds).

134) Why doesn't the State pay fishermen NOT to fish for bottomfish? They do that for farmers.

DAR Response: We do not believe that it is a viable management option for various reasons. Among others, farmers produce (sedentary) crops on their own land (or land held in a lease/rent arrangement). Commercial fishers harvest a changing and migrating resource (fish stocks), held in trust for future generations.

135) Do our comments and suggestions really make a difference? Isn't this a done deal?

DAR Response: DAR held statewide public meetings to present the recommendations for improving the BRFAs. The public comments resulted in changes to the recommended BRFAs. Refer to the maps on our website.

136) Why is WESPAC offering so many alternatives, while the STATE offers only one, BRFAs?

DAR Response: WESPAC presented the range of alternatives they were considering, but eventually decided upon the seasonal closure option (after the meetings). The State considered other alternatives before the 1998 BRFAs were established, and once again when the existing BRFAs were evaluated. DLNR/DAR determined that the BRFAs offered the best protection for bottomfish resources. DAR and WESPAC were just at different stages in the development of management plans.

137) Is the military going to be kept out too?

DAR Response: Military presence within the BRFAs would be allowed for national security reasons only. Fishing regulations apply to all.

138) State should have projects to replenish fish stocks such as creating artificial reefs to replenish stocks, or a facility to spawn, hatch, rear and release fish into the ocean.

DAR Response: See DAR Response # 133

139) State harbors should be repaired and fixed.

140) The State should conduct an economic impact statement.